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## HOW TO ACHIEVE THE LAND SOCIAL FUNCTION FROM TOURISM LAND USES: A CASE STUDY IN THE ALGARVE (PORTUGAL)

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**Abstract** *This paper presents the goals, methodology, expected results and conclusions of a new territorial management instrument – developed in the scope of the new Land, Territorial Ordinance and Urbanism Act and complementary legislation currently passed in Portugal – aimed at capturing part of the unearned increments (surplus values) that accrue from planning decisions concerning land uses, land use changes and/or land use intensities. It consists in charging landowners/promoters a 20% fee on land surplus-values that result from the assignment of specific building capacities - objectively settled in territorial plans - to urban interventions especially targeted to tourism uses.*

*This captured value should reinforce municipalities' financial sustainability, and is supposed to be reassigned to social purposes, such as social housing or urban rehabilitation, thus supporting the achievement of the land social function.*

*The proposed methodology is applied to the Urban Development Plan of the Planning Unit 11 of the municipality of Lagoa, located in the Algarve, Portugal. However, it is easily applicable to other municipalities, whichever is their geographic location, and to many different kinds of territorial plans.*

## 1. INTRODUCTION

Land prices rise as a result of public interventions and planning decisions, namely concerning the development and implementation of territorial plans, or changes in urban land use or use intensity parameters (Alterman 2011; Walters, 2012).

Many authors argue that part of this land value that accrue from planning decisions should be captured and applied on behalf of the overall community [1, 2, 3, 4, 5].

Within a scope of economic and financial crisis, municipal decision makers increasingly resort to land value capture instruments as means to overcome and balance shrinking revenues proceeding from traditional local taxes (especially in the United States of America and some European countries) [6, 7, 8].

Land value capture may be pursued through taxes, contributions, or regulations [9]. The use of fiscal instruments shape urban development [10] as they exert a considerable effect on market performance and land uses and, as a result, limit planning goals' achievement. Their efficiency may be assessed from their consequences on planning and on urban development funding [11]. Taxation of land surplus values ensures public administration an alternative source of income (besides other taxes), on the one hand, and returns back to the social interest the increases in land values that accrue from public decisions, on the other.

The revision of the territorial planning and urban development legal framework is currently taking place in Portugal. The new Land Territorial Ordinance and Urbanism Act (Lei nº 31/2014) is already enforced, as well as the new Juridical Regime of Urbanization and Edification (DL nº 136/2014), and the new juridical regime of territorial planning instruments (DI nº 80/2015). Within the scope of this revision, a deep reflection has been devoted to the economic and financial sustainability of urban development processes, and the law recommends the development of technical studies as a pre-requisite to support the approval of plans.

The proposal presented in this paper fits these concerns, describing in detail a new land policy fiscal instrument that enables the capture of at least part of the surplus values engendered through the assignment of concrete building capacities by plans, namely Municipal Master Plans, Urban Development Plans, Detail Plans, parcelling out procedures, or other instruments of territorial management.

This new instrument assures municipalities a better economic and financial sustainability, based on a clear identification of urban development funds' origins and applications. Thus the recovery of surplus values that accrue from planning decisions [9] settles a more balanced distribution of urban development costs and benefits among the whole population and public and private stakeholders, releasing most citizens from fiscal overburdens, as well as from increases in building costs [9, 12].

## 2. METHODOLOGY

The abstract average municipal building capacity/m<sup>2</sup> is first computed through the

quotient between the product of total licensed gross built surfaces<sup>i</sup> (in m<sup>2</sup>) assigned to different types of uses and respective occupation and use indexes, weighted by corresponding percentages, and the total municipal surface assigned to urban uses (Figure 1).

Then is computed the concrete building capacity/m<sup>2</sup> of a certain execution unit or intervention area through the quotient between the product of total licensed gross built surfaces (in m<sup>2</sup>) assigned to different kinds of uses and respective occupation and use indexes, weighted by corresponding percentages, and the total surface of the execution unit or intervention area (according to enforced ordering plans).

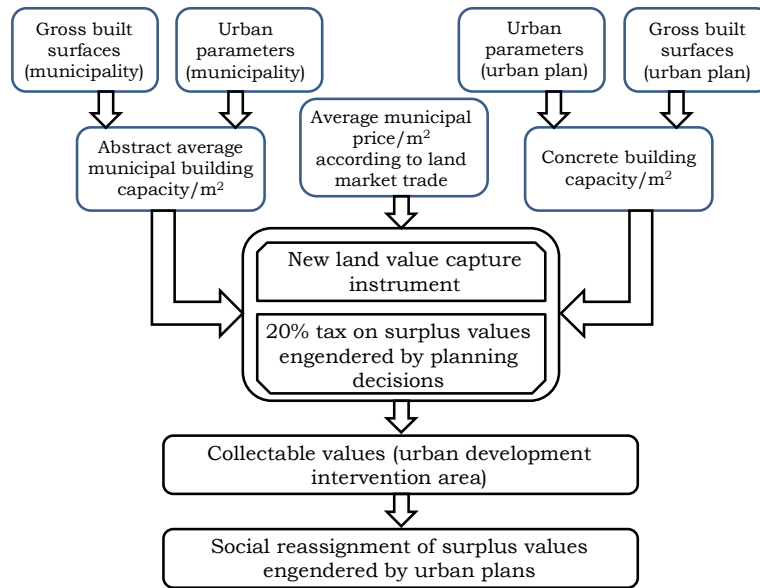


Figure 1. Methodological steps pursued in this research.

The land price/m<sup>2</sup> according to market trade is estimated by the difference between the municipal price/m<sup>2</sup> in the municipality under analysis (according to market trade data) net of the average costs/m<sup>2</sup> with urban infrastructures' execution, maintenance and reinforcement and the average building costs/m<sup>2</sup>. An approach to the surplus values/m<sup>2</sup> is reckoned through the difference between this land price/m<sup>2</sup> for each kind of use and the corresponding tributary patrimonial value of buildable land according to the enforced Real Estate Municipal Tax Code (IMI, in Portuguese language).

The product between this surplus value/m<sup>2</sup> and the concrete building capacities of the execution unit or intervention area under analysis for each kind of use, summed to the whole plots of the urban intervention, for all the anticipated uses, finally gives the estimated total amount of surplus values.

Finally the potential surplus-value capture amounts to 20% the sum total of the previous value. Reflections are pursued concerning the social reassignment of surplus values

<sup>i</sup> According to Urban Development Plans, Detail Plans, or parcelling out procedures.

engendered by the applied urban plans.

### 3. CASE STUDY

#### 3.1. The Urban Development Plan of the Planning Unit UP 11 in Lagoa

Lagoa is a Municipality that locates in Faro district (Portugal) (Figure 2). It has a surface of 88,3 km<sup>2</sup> and holds a population of 22 791 inhabitants. The tertiary sector is responsible for 84,8% of employment in this municipality, slightly higher than the homologous employment in the Algarve region (82,5%)), and in continental Portugal (65,3%))[14].



Figure 2. Lagoa Municipality (Algarve).

In Lagoa Municipality are enforced the Municipal Master Plan of Lagoa<sup>ii</sup>; the Urban Development Plan of the Planning Unit 1 – UP 1 from Ferragudo to Calvário<sup>iii</sup>; the Urban Development Plan of the Touristic Capacity Area of the Planning Unit 12 - UP 12<sup>iv</sup>; the Urban Development Plan of the Planning Unit 11 - UP 11<sup>v</sup>; the Urban Development Plan of the Town of Lagoa<sup>vi</sup>; the Ordering Plan of the seashore of Burgau-Vilamoura<sup>vii</sup>; the Regional Plan of Territorial Ordering PROT - Algarve<sup>viii</sup>; the Plan of the Hydrological Basin of the Algarve Streams<sup>ix</sup>; the Regional Plan of Forest Ordering (PROF) of Algarve<sup>x</sup>; the Natura 2000 Network<sup>xi</sup>; the Partial suspension of the Regional Forest Ordering Plan (PROF) of Algarve<sup>xii</sup>; and the Management Plan of the Hydrological Basins that take part in the Hydrological Basin 8 (RH8) – PGBH of the Algarve Streams<sup>xiii</sup>.

The Municipal Master Plan of Lagoa aims at ordering respective territory to assure a balanced socio-economic development, stating rules for a rational use of spaces, and promoting the management of resources and heritage assets to raise population's quality

<sup>ii</sup> RCM n° 29/94; Aviso n° 26197/2008; Aviso n° 3872/2012

<sup>iii</sup> RCM n° 126/99; Edital 613/2009

<sup>iv</sup> Declaração n° 56/2008

<sup>v</sup> Aviso n° 44845/2008

<sup>vi</sup> Aviso n° 11622/2008

<sup>vii</sup> RCM n° 33/99

<sup>viii</sup> RCM n° 102/2007; RCM n° 188/2007

<sup>ix</sup> DR 12/2002

<sup>x</sup> DR n° 17/2006

<sup>xi</sup> RCM n° 115-A/2008

<sup>xii</sup> Portaria n° 78/2013

<sup>xiii</sup> RCM n° 16-E/2013

of life.

The municipal built-up areas locate in the urban developed and developable zones of Lagoa, Estômbar, Porches, Aldeia de Luís Francisco, Ferragudo, Corgos, Bela Vista, Parchal, Mexilhoeira da Carregação, Pateiro, Calvário, Carvoeiro, Poço Partido, Sobral and Torrinha. Their corresponding planning and management operational units UP 1, UP 2; UP 3; UP 4; UP 8; and UP 9 may undergo changes.

The surfaces occupied by touristic uses (duly approved by public entities) and the interstitial adjacent areas make up the touristic occupation areas, that are identified in the Municipal Master Plan by planning units UP 7, UP 10, and UP 13.

The identified Touristic Capacity Areas, by their turn, include the Touristic Development Nuclei in the planning and management operational units UP 5, UP 6, UP 11 and UP 12. Until the approval of the Touristic Development Nuclei – assigned to 25% of the Touristic Capacity Areas –, these areas should adopt the regime of the land use, occupation and transformation stated in the ordering plans, in the constricting plan, and in the Municipal Master Plan of Lagoa.

According to this Municipal Master Plan, the Touristic Development Nuclei mustn't embrace natural reserves or parks, the touristic developments should be solely targeted to touristic uses (excluding incompatible occupations) and conform with high quality standards, providing leisure facilities; support internal infrastructure costs and share municipal infrastructure's costs. Each Touristic Development Nucleus may embrace several touristic undertakings, but these should be served by a network of infrastructures, whereas the occupied land plots should belong to the same Touristic Capacity Areas.

The Urban Development Plan of the Planning Unit 11 (UP 11) is a Touristic Capacity Area that can embrace one or more Touristic Development Nuclei (NDT). Its intervention area – the whole operational unit – locates between Marinha beach and Cabo Carvoeiro, and takes up 401,6 hectares in the parishes of Lagoa and Carvoeiro, in the municipality of Lagoa. This Urban Development Plan sets land occupation, use and transformation capacities in its intervention area (through correspondent urban parameters).

The settled specific goals of the Touristic Capacity Area of UP 11 consist in the implementation – through correspondent execution units - of two Touristic Development Nuclei, East NDT and West NDT. Both should respect the ecological structure, and natural and cultural landscape values. The total surfaces assigned to both Touristic Development Nuclei (997 737 m<sup>2</sup>) mustn't exceed 25% of the whole surface of UP 11 settled in the Municipal Master Plan of Lagoa (4 016 158 m<sup>2</sup>): East NDT has a surface of 741 890 m<sup>2</sup> and West NDT has surface to 255 847 m<sup>2</sup>.

The intervention area of UP 11 encompasses both urban land (developed land and land which urban development may be programed) and rural land. Developed urban land includes the urban areas outside the Touristic Development Nuclei settled in the Municipal Master Plan: the consolidated urban area of Benagil, the touristic-urban area at Carvalho beach's north (Clube Atlântico), and two touristic-urban areas located near Alfanzina. Their building regime should conform to respective building licence where parcelling out operations are enforced.

Land which urban development may be programed includes the new touristic areas inside both East NDT and West NDT. Land which urban development may be programed mustn't surpass 30% of the total surface of the Touristic Development Nuclei. The East Touristic Development Nucleus structures into N1 and N2 planning and management operational sub-units; and the West Touristic Development Nucleus structures into P1 and P2 planning and management operational sub-units.

All touristic undertakings in each programed urban development land Touristic Development Nucleus must conform to four-star or higher category. A maximum of 1 279 beds are assigned to the East Touristic Development Nuclei, whereas a maximum of 441 beds are assigned to the West Touristic Development Nuclei, adding up 1 720 beds.

Only hotels and/or further touristic facilities are allowed in programed urban development land where the Ordering Plan of the seashore of Burgau-Vilamoura is enforced<sup>xiv</sup>. Land which urban development may be programed in Touristic Development Nuclei should further observe the building regime of respective planning and management operational sub-units, according to the classifications licensed in touristic undertakings.

### 3.2. Application of the new land value capture instrument to the Planning Unit 11 in Lagoa

The estimation of the annual average gross built surface in the municipality of Lagoa resorted to statistical data collected for a four-year period, in order to avoid fluctuations of situation. The average gross built surface (for developed and developable urban land) (6) is given by the product between each year's finished buildings<sup>xv</sup> (1), the average number of storeys per building (2), the average number of dwellings per storey (3), the average number of compartments per dwelling (4), and the average liveable surface per compartment (5) (m<sup>2</sup>), divided by 0,65 (as the liveable surface represents around 65% of the gross built surface) [13, 14, 15, 16] (Table 1).

Table 1. Estimation of the annual gross built surface in the Municipality of Lagoa for 2008, 2009, 2010 and 2011, and corresponding annual average value

	2008	2009	2010	2011	Total	Average
Total number of finished buildings (1)	228	137	114	64	543	136
Average number of storeys per building (2)	2,7	2,5	2,4	2,2	9,8	2,5
Average number of dwellings per storey (3)	1,2	1,6	0,7	0,5	4,0	1,0
Average number of compartments per building (4)	4,3	4,4	5,5	5,8	20,0	5,0
Average liveable surface per compartment (m <sup>2</sup> ) (5)	17,3	17,5	19,8	21,6	76,2	19,0
Total gross built surface (m <sup>2</sup> ) (6)=(1)x(2)x(3)x(4)x(5)/0,65	82.539,8	64.916,9	32.087,0	13.568,8	193.112	48.278

The average annual costs with infrastructures' execution, maintenance and reinforcement was computed resorting to the data of the municipal amortization and provision maps respecting the assets within the public domain – other construction and urban infrastructure, for 2009, 2010, 2011 and 2012. The average annual investment amounted to 34 044 069 € [17], thus it

<sup>xiv</sup> Except in the “*nonaedificandi*” area depicted in the zoning plan in the East NDT (where buildings are forbidden).

<sup>xv</sup> It corresponds to the sum of new buildings, and buildings' enlargement, changes and/or reconstruction.

leads to an estimation of 705,2 €/m<sup>2</sup> average annual infrastructure costs (Table 2).

Table 2. Average investment/m<sup>2</sup> in urban infrastructures' execution, maintenance and reinforcement in Lagoa Municipality.

Investments in urban infrastructures' execution, maintenance and reinforcement	2009	2010	2011	2012
Annual amortization of urban infrastructure (€)	26.399.063	31.439.028	36.570.644	41.767.542
Annual average investment (€)	34.044.069			
Annual average gross built surface (m <sup>2</sup> )	48.278			
Infrastructure's cost (€/m <sup>2</sup> )	705,2			

For each year, the transaction value/m<sup>2</sup> (€/m<sup>2</sup>) in Lagoa Municipality (3) is computed through the quotient between the value of land property transactions (1) [13, 14, 15, 16] and the total gross built surface (2) (Table 3). Buildable land price per m<sup>2</sup> according to market trade (6) is given by the difference between the transaction value/m<sup>2</sup> (3) and the average construction costs/m<sup>2</sup> <sup>xvi</sup> (4) and the average urban infrastructures' execution, maintenance and reinforcement costs/m<sup>2</sup> (5).

Table 3. Price of buildable land/m<sup>2</sup> in the municipality of Lagoa, in 2008, 2009, 2010 and 2011

	2008	2009	2010	2011
Total value of town property trade (€) (1)	101.687.923	92.541.438	93.778.000	103.169.000
Gross built surface (m <sup>2</sup> ) (2)	82.539,8	64.916,9	32.087,0	13.568,8
Transaction value/m <sup>2</sup> (€/m <sup>2</sup> ) (3)=(1)/(2)	1.232,0	1.425,5	2.922,6	7.603,4
Construction costs/m <sup>2</sup> (4)	482,4			
Urban infrastructure costs/m <sup>2</sup> (5)	705,2			
Price of buildable land/m <sup>2</sup> of construction (€/m <sup>2</sup> ) (6)=(3)-(4)-(5)	44,4	237,9	1.735,0	6.415,8

The average municipal land price of buildable land/m<sup>2</sup> based on town property trade is computed through the sum of the different land prices/m<sup>2</sup> for each planning and management sub-operational unit and for each type of use within the Planning Unit 11, assuming that respective contribution for this price is proportional to the licensed gross built surface for profitable uses. So the gross built surface assigned to profitable uses (m<sup>2</sup>) was identified in each area of Lagoa Municipality (where apply different planning instruments and urban parameters). The product between the price of buildable land/m<sup>2</sup> and respective net land use index/m<sup>2</sup> of land was next computed. The share of each area in the average land price/m<sup>2</sup> each year is given by the product of the previous value and respective percentage in relation to the maximum gross built surface licensed in the total urban developed and developable municipal areas. These parcels are, then, summed up for all the areas, each year, what leads to 721,9 euros/m<sup>2</sup> for municipal land price, on average, per year.

The application of the parameters and formula settled in the Real Estate Municipal Tax Code in each area within Lagoa Municipality lead to an average annual tributary patrimonial value of 56,1 euros/m<sup>2</sup> of buildable land (based on corresponding values for 2008, 2009, 2010 and 2011).

<sup>xvi</sup> These costs are issued in the governmental orders that render applicable the article 39<sup>th</sup> of the Real Estate Municipal Tax Code enforced in 2008, 2009, 2010 and 2011 (Portaria n° 16-A/2008; Portaria n° 1545/2008; Portaria n° 1456/2009; and Portaria n° 1330/2010, respectively.)

The surplus values ascribable to each planning and management operational sub-unit and to each kind of land touristic profitable use was, then, reckoned through the product between the homologous licensed gross build surface and the difference between the annual land price/m<sup>2</sup> based on market trade (721,9 €/m<sup>2</sup>) and the corresponding price based on the application of the Real Estate Municipal Tax Code to Lagoa municipality (56,1 €/m<sup>2</sup>) (Table 4). The proposed 20% tax aimed at social purposes is, then, applied to the intervention area of this Development Plan, amounting to 12 764 718 € as the potential collectable value.

Table 4. Average surplus values and corresponding 20% tax on these surplus values for all the planning and management operational sub-units and respective profitable touristic uses in the Planning Unit 11 of Lagoa.

Touristic undertakings			Land surface (m <sup>2</sup> )	Gross built surface (m <sup>2</sup> ) (1)	Surplus values (€) (2)=(1)*665,8	20% of surplus values (€) (3)=0,2x(2)
Planning and management operational sub-units		Classification				
Planning and management operational sub-unit East NDT	N.1	Lodging establishments (Hotels)	30.000	15.000	9.987.000	1.997.400
	N.2	Lodging establishments (Hotels, Serviced Flats ou Inns)	191.050	56.210	37.424.618	7.484.924
		Lodging complementary means (Holiday Villages)				
	Total (East NDT)			221.050	71.210	47.411.618
Planning and management operational sub-unit West NDT	P.1	Lodging establishments (Hotels)	10.000	5.000	3.329.000	665.800
	P.2	Lodging establishments (Hotels, Serviced Flats ou Inns)	66.754	19.650	13.082.970	2.616.594
		Lodging complementary means (Holiday Villages)				
	Total (West NDT)			76.754	24.650	16.411.970
Total values in the Planning Unit 11 ( UP 11)			297.804	95.860	63.823.588	12.764.718

#### 4. CONCLUSIONS AND FINAL REFLECTIONS

This article justifies from an economic and financial standpoint, and applies to the development Plan of The Planning Unit 11, in Lagoa (Portugal), a new territorial management instrument – that consists in the collection of a 20% fee on surplus values accrued by plans and planning decisions.

Through the objective quantification of the concrete surplus values that derive from urban operations and from municipal planning decisions this new instrument, thus, supports the reinforcement of municipal finance and subsequent economic and financial sustainability, the clarification of the origins and applications of funds that accrue from urban development, and the allocation of these surplus values for the population's general social interest and not for private-oriented specific interests. It seeks, above all, a fair equity among the whole population living in a certain Municipality, in what concerns the distribution of costs and benefits that accrue from urban development operations.

This new territorial management tool takes on a general character, and can be further applied to other municipalities and intervention areas of Municipal Master Plans, Urban Development Plans or Detail Plans, as it grounds on data and methodologies that support inter-municipal comparisons.



To sum up, it can be concluded that this new instrument – within the scope and goals of the new planning and territorial management paradigm, namely in what concerns the economic and financial sustainability and the promotion of equity and social cohesion - will substantially support the urban development and enhance populations' quality of life.

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